Manitoba Agriculture

Information Update

FARM PLANNING GUIDE
1989 CROP ESTIMATES

DATE: January, 1989

The projected crop costs enclosed in these two budgets have been prepared to assist you in developing your own production costs. The budgets assume continuous cropping.

The cash cost inputs associated with growing a crop in Manitoba are substantial. It is extremely important for a farm manager to do detailed calculations if he is to select the optimum crop combination that will maximize profits. Detailed planning is also necessary when estimating the amount of operating credit required to finance the inputs. The importance of good financial management can be emphasized by noting that a 400 hectare (1000 acre) farm requires somewhere in the vicinity of $85,000 for cash inputs alone.

The following budgets are estimates of the cost of producing several different crops in 1989. General departmental recommendations are assumed in using fertilizers and chemical inputs. The figures provide an economic evaluation of the crops and estimate the yields required to cover all costs plus give a return to labor, management and investment. To estimate a cash flow budget the actual payments on principal and interest may be substituted for the fixed costs. As well, an estimate has to be made of family living costs, funds required for capital purchases and a cost analysis of livestock enterprises on the farm especially if your farm is not a straight grain farm.

These budgets may be adjusted by putting in your own figures. As a producer you are encouraged to calculate your own costs of production for various crops. On each farm, costs and yields differ due to soil type, climatic conditions, and agronomic practices.

89-03852/

CROP PRODUCTION COSTS 1989

	Wheat	Barley	Canola	Flax	Rye
	$	$	$	$	$
OPERATING COSTS:					
1) Seed & Treatment	21.84	17.82	19.83	25.65	12.64
2) Fertilizer	53.85	53.85	58.16	28.14	43.30
3) Chemicals	43.24	38.30	24.71	35.83	6.18
4) Fuel	22.24	22.24	22.24	22.24	22.24
5) Machinery Operating Costs	17.91	17.91	17.91	17.91	17.91
6) Insurance	18.78	16.68	29.65	22.24	14.83
7) Other Costs	14.83	14.83	14.83	14.83	14.83
8) Land Taxes	12.36	12.36	12.36	12.36	12.36
9) Drying Costs	--	--	--	--	--
10) Interest on Operating	14.35	13.58	13.98	12.54	10.24
TOTAL OPERATING COSTS	219.40	207.57	213.67	191.74	156.53
FIXED COSTS:					
11) Land Investment Costs	88.22	88.22	88.22	88.22	88.22
12) Machinery Depreciation	24.71	24.71	24.71	24.71	24.71
13) Machinery Investment Cost	24.71	24.71	24.71	24.71	24.71
14) Storage Costs	7.88	7.88	7.88	7.88	7.88
15) Labor and Management	40.77	40.77	40.77	40.77	40.77
TOTAL FIXED COSTS	186.29	186.29	186.29	186.29	186.29
TOTAL OPERATING & FIXED COSTS	405.69	393.86	399.96	378.03	342.82
			BREAKEVEN ANALYSIS		
Price/Unit	$147/t	$101/t	$302/t	$280/t	$98/t
Breakeven Yield for Operating Costs	1.493 t	2.055 t	708 kg	685 kg	1.597 t
Breakeven Yield for Total Costs	2.760 t	3.900 t	1.324 t	1.350 t	3.498 t

GUIDELINES (DOLLARS PER HECTARE)

Corn $	Sunflowers $	Peas $	Lentils $	Buckwheat $	Navy Beans $	My Farm
42.65	34.72	73.92	44.22	32.40	60.50	_____
90.68	64.01	43.31	43.31	61.53	57.59	_____
54.36	24.71	29.65	39.54	24.71	70.42	_____
24.71	23.47	23.47	22.24	22.24	24.71	_____
22.86	20.39	19.15	19.15	17.91	21.62	_____
25.95	17.30	24.71	30.89	33.36	34.59	_____
16.06	16.06	16.06	14.83	14.83	16.06	
16.06	12.36	16.06	12.36	12.36	16.06	_____
49.42	14.83	--	--	--	--	_____
23.99	15.95	17.24	15.86	15.35	21.11	_____
366.74	243.80	263.57	242.40	234.69	322.66	_____
128.25	88.22	128.25	88.22	88.22	128.25	_____
32.12	27.18	25.95	25.95	24.71	32.12	_____
32.12	27.18	25.95	25.95	24.71	32.12	_____
15.77	7.88	7.88	7.88	7.88	7.88	_____
40.77	40.77	40.77	40.77	40.77	40.77	_____
249.03	191.23	228.80	188.77	186.29	241.14	_____
615.77	435.03	492.37	431.17	420.98	563.80	_____

PER HECTARE YIELDS

$118/t	$243/t	$184/t	$375/t	$264/t	$551/t	_____
3.108 t	1.003 t	1.432 t	646 kg	889 kg	586 kg	_____
5.218 t	1.790 t	2.676 t	1.150 t	1.595 t	1.023 t	_____

CROP PRODUCTION COSTS 1989

	Wheat	Barley	Canola	Flax	Rye
	$	$	$	$	$
OPERATING COSTS:					
1) Seed & Treatment	8.75	7.13	8.50	10.40	5.00
2) Fertilizer	21.88	21.88	23.55	11.40	18.50
3) Chemicals	17.50	15.50	10.00	14.50	2.50
4) Fuel	9.00	9.00	9.00	9.00	9.00
5) Machinery Operating Costs	7.25	7.25	7.25	7.25	7.25
6) Insurance	7.60	6.75	12.00	9.00	6.00
7) Other Costs	6.00	6.00	6.00	6.00	6.00
8) Land Taxes	5.00	5.00	5.00	5.00	5.00
9) Drying Costs	--	--	--	--	--
10) Interest on Operating	5.81	5.50	5.69	5.08	4.15
TOTAL OPERATING COSTS	88.79	84.01	86.99	77.63	63.40
FIXED COSTS:					
11) Land Investment Costs	35.70	35.70	35.70	35.70	35.70
12) Machinery Depreciation	10.00	10.00	10.00	10.00	10.00
13) Machinery Investment	10.00	10.00	10.00	10.00	10.00
14) Storage Costs	3.19	3.19	3.19	3.19	3.19
15) Labor and Management	16.50	16.50	16.50	16.50	16.50
TOTAL FIXED	75.39	75.39	75.39	75.39	75.39
TOTAL COST	164.18	159.40	162.38	153.02	138.79

BREAKEVEN ANALYSIS

Price/Unit	$4.00/bu	$2.20/bu	$6.85/bu	$7.10/bu	$2.50/bu
(or per Per Tonne Equivalent)	$147.00/t	$101.00/t	$302.00/t	$280.00/t	$98.00/t
Breakeven Yield for Operating Costs	22.2 bu	38.2 bu	12.7 bu	10.9 bu	25.4 bu
Breakeven Yield for Total Costs	41.0 bu	72.5 bu	23.7 bu	21.6 bu	55.5 bu

GUIDELINES (DOLLARS PER ACRE)

Corn	Sunflowers	Peas	Lentils	Buckwheat	Navy Beans	My Farm
$	$	$	$	$	$	
23.00	13.50	30.00	18.00	13.00	24.75	_____
36.60	26.10	17.50	17.50	24.80	23.20	_____
22.00	10.00	12.00	16.00	10.00	28.50	_____
10.00	9.50	9.50	9.00	9.00	10.00	_____
9.25	8.25	7.75	7.75	7.25	8.75	_____
10.50	7.00	10.00	12.50	13.50	14.00	_____
6.50	6.50	6.50	6.00	6.00	6.50	_____
6.50	5.00	6.50	5.00	5.00	6.50	_____
20.00	6.00	--	--	--	--	_____
10.10	6.43	6.98	6.42	6.20	8.55	_____
154.45	98.28	106.73	98.17	94.75	130.75	_____
51.90	35.70	51.90	35.70	35.70	51.90	_____
13.00	11.00	10.50	10.50	10.00	13.00	_____
13.00	11.00	10.50	10.50	10.00	13.00	_____
6.38	3.19	3.19	3.19	3.19	3.19	_____
16.50	16.50	16.50	16.50	16.50	16.50	_____
100.78	77.39	92.59	76.39	75.39	97.59	_____
255.23	175.67	199.32	174.56	170.14	228.34	_____

PER ACRE YIELDS

$3.00/bu. $118.00/t	$0.11/lb. $243.00/t	$5.00/bu. $184.00/t	$0.17/lb $375.00/t	$5.75/bu $264.00/t	$0.25/lb $551.00/t	_____
51.5 bu.	893 lb.	21.3 bu.	577 lb.	16.5 bu.	523 lb.	_____
85.1 bu.	1597 lb.	39.9 bu.	1027 lb.	29.6 bu.	913 lb.	_____

CROP BUDGET ASSUMPTIONS

1) Seed & Treatment

Per Hectare

	Crop	Rate/ha	Price/Unit	Cost/ha
**	Wheat	84 kg	$ 0.26/kg	$21.84
**	Barley	81 kg	$ 0.22/kg	$17.82
*	Canola	7 kg	$ 1.10/kg	$ 7.70
	Flaxseed	45 kg	$ 0.57/kg	$25.65
	Rye	79 kg	$ 0.16/kg	$12.64
	Corn	56,865 plants	$80.00/80,000	$42.65
	Sunflowers	7 kg	$ 4.96/kg	$34.72
	Peas	168 kg	$ 0.44/kg	$73.92
	lentils	67 kg	$ 0.66/kg	$44.22
	Buckwheat	54 kg	$ 0.60/kg	$32.40
	Navy Beans	50 kg	$ 1.21/kg	$60.50

* Canola Seed treatment cost is an additional cost. Budget assumes only in-furrow application at $12.13/hectare; not lindane seed dressing.

** Seed treatment cost is included in seed cost at $4.95/hectare.

Per Acre

	Crop	Rate/acre	Price/Unit	Cost/ac
**	Wheat	1.25 bu.	$ 7.00/bu.	$ 8.75
**	Barley	1.5 bu.	$ 4.75/bu.	$ 7.13
*	Canola	6 lbs.	$ 0.50/lb.	$ 3.00
	Flaxseed	40 lbs.	$ 0.26/lb.	$10.40
	Rye	1.25 bu.	$ 4.00/bu.	$ 5.00
	corn	23,000 plants	$80.00/80,000	$23.00
	Sunflowers	6 lbs.	$ 2.25/lb.	$13.50
	Peas	2.5 bu.	$12.00/bu.	$30.00
	lentils	60 lbs.	$ 0.30/lb.	$18.00
	Buckwheat	1 bu.	$13.00/bu.	$13.00
	Navy Beans	45 lbs.	$ 0.55/lb.	$24.75

* Canola Seed treatment cost is an additional cost. Budget assumes only in-furrow application at $5.50/acre; not lindane seed dressing.

** Seed treatment cost is included in seed cost at $2/acre.

2) Fertilizer Price/kg	Nitrogen 42¢	$	Phosphorous 57¢	$	Potash 39¢	$	Sulfur 46¢	$	Cost/ ha($)
	Per Hectare								
Crop:	kg	Cost	kg	Cost	kg	Cost	kg	Cost	Cost
Wheat	78	32.76	37	21.09	--	--	--	--	53.85
Barley	78	32.76	37	21.09	--	--	--	--	53.85
Canola	90	37.80	22	12.54	--	--	17	7.82	58.16
Flaxseed	67	28.14	--	--	--	--	--	--	28.14
Rye	78	32.76	22	12.54	--	--	--	--	45.30
Corn	101	42.42	45	25.65	45	17.55	11	5.06	90.68
Sunflowers	67	28.14	39	22.23	22	8.58	11	5.06	64.01
Peas	--	--	39	22.23	34	13.26	17	7.82	43.31
Lentils	--	--	39	22.23	34	13.26	17	7.82	43.31
Buckwheat	62	26.04	39	22.23	34	13.26	--	--	61.53
Navy Beans	34	14.28	39	22.23	34	13.26	17	7.82	57.59

2) Fertilizer Price/lb	Nitrogen 19¢	$	Phosphorous 26¢	$	Potash 18¢	$	Sulfur 21¢	$	Cost/ acre($)
	Per Acre								
Crop:	lbs.	Cost	lbs.	Cost	lbs.	Cost	lbs.	Cost	Cost
Wheat	70	13.30	33	8.58	--	--	--	--	21.88
Barley	70	13.30	33	8.58	--	--	--	--	21.88
Canola	80	15.20	20	5.20	--	--	15	3.15	23.55
Flaxseed	60	11.40	--	--	--	--	--	--	11.40
Rye	70	13.30	20	5.20	--	--	--	--	18.50
Corn	90	17.10	40	10.40	40	7.00	10	2.10	36.60
Sunflowers	60	11.40	35	9.10	20	3.50	10	2.10	26.10
Peas	--	--	35	9.10	30	5.25	15	3.15	17.50
Lentils	--	--	35	9.10	30	5.25	15	3.15	17.50
Buckwheat	55	10.45	35	9.10	30	5.25	--	--	24.80
Navy Beans	30	5.70	35	9.10	30	5.25	15	3.15	23.20

Note: Fertilizer rates as recommended by the University of Manitoba under normal climatic conditions.

3) Chemicals:

PER HECTARE

CROP	PRE-EMERGENCE HERBICIDES $/Ha	POST-EMERGENCE BROADLEAF HERBICIDES $/Ha	WILD OATS MILLET HERBICIDES $/Ha	INSECTICIDES FUNGICIDES $/Ha	TOTAL COST/Ha $
Wheat	--	11.12	32.12	--	43.24
Barley(1)	--	6.18	32.12	--	38.30
Canola	--	--	24.71	--	24.71
Flaxseed	--	11.12	24.71	--	35.83
Rye	--	6.18	--	--	6.18
Corn(2)(3)	--	8.65	45.71	--	54.36
Sunflowers	--	--	24.71	--	24.71
Peas	--	4.94	24.71	--	29.65
Lentils	--	14.83	24.71	--	39.54
Buckwheat	--	--	24.71	--	24.71
Navy Beans(4)	--	45.71	24.71	--	70.42

(1) Fungicide Treatment $54.34 Not In The Budget.
(2) Pre-Emergence part band $29.64 Not In The Budget.
(3) Corn Borer Treatment $24.25 Not In The Budget.
(4) Fungicide Treatment $64.25 Not In The Budget.

PER ACRE

CROP	PRE-EMERGENCE HERBICIDES $/Ac	POST-EMERGENCE BROADLEAF HERBICIDES $/Ac	WILD OATS MILLET HERBICIDES $/Ac	INSECTICIDES FUNGICIDES $/Ac	TOTAL COST/AC $
Wheat	--	4.50	13.00	--	17.50
Barley(1)	--	2.50	13.00	--	15.50
Canola	--	--	10.00	--	10.00
Flaxseed	--	4.50	10.00	--	14.50
Rye	--	2.50	--	--	2.50
Corn(2)(3)	--	3.50	18.50	--	22.00
Sunflowers	--	--	10.00	--	10.00
Peas	--	2.00	10.00	--	12.00
Lentils	--	6.00	10.00	--	16.00
Buckwheat	--	--	10.00	--	10.00
Navy Beans(4)	--	18.50	10.00	--	28.50

(1) Fungicide Treatment $22.00 Not In The Budget.
(2) Pre-Emergence part band $12.00 Not In The Budget.
(3) Corn Borer Treatment $11.00 Not In The Budget.
(4) Fungicide Treatment $26.00 Not In The Budget.

4) Fuel Costs:

Includes fuel used for field work, trucking inputs in and product out, and travel for farm business purposes.

5) Machinery & Operating Costs:

Includes costs for maintenance, repairs, licences and insurance.

6) Crop Insurance: (1989 rates)

Risk Area #6 at the average coverage dollar rate plus hail spot loss and part II insurance at $100/acre coverage for wheat, barley, canola, flax and rye.

Risk Area #11 at the high coverage dollar rate on a "B" soil zone plus hail spot loss and part II insurance, at $100/acre coverage for sunflowers, peas, lentils, buckwheat, beans and Corn Area A.

7) Other Costs:

Includes overhead expenses - hydro, telephone, accounting, building insurance, etc.

8) Land Taxes

The average for the province was based on land tax assessment and mill rates of a sample of municipalities growing crops less provincial tax rebate. Budget assumes $12.36/ha ($5.00/acre) except for corn, peas and navy beans which are normally grown on higher productive land where land taxes are estimated at $16.06/ha ($6.50/acre).

9) Drying Costs:

Budget allocates costs only for corn and sunflowers. However, drying costs may be incurred in some years for other crops.

10) Interest On Operating

Interest charges on operating costs are calculated at 14% for six months.

11) Land Investment Cost:

Land values are based on the three-year average land sale values in Manitoba; except for corn, peas and navy beans where the average land sale values were those reported in crop District #8. Assumed 10% return on land investment.

12) Depreciation:

Assumed 10% depreciation, no salvage value.

13) Investment Cost:

10% opportunity cost on the machinery investment per hectare or acre by crop.

PER HECTARE

Crop	Land Investment Per Ha($)	Land Investment Cost($)	Machinery Investment Per Ha($)	Machinery Depreciation Cost($)	Machinery Investment Cost($)
Wheat	882.00*	88.22	247.10	24.71	24.71
Barley	882.00*	88.22	247.10	24.71	24.71
Canola	882.00*	88.22	247.10	24.71	24.71
Flaxseed	882.00*	88.22	247.10	24.71	24.71
Rye	882.00*	88.22	247.10	24.71	24.71
Corn	1,282.00**	128.25	321.23	32.12	32.12
Sunflowers	882.00*	88.22	271.81	27.18	27.18
Peas	1,282.00**	128.25	259.46	25.95	25.95
Lentils	882.00*	88.22	259.46	25.95	25.95
Buckwheat	882.00*	88.22	247.10	24.71	24.71
Navy Beans	1,282.00**	128.25	321.23	32.12	32.12

PER ACRE

Crop	Land Investment Per Acre($)	Land Investment Cost($)	Machinery Investment Per Acre($)	Machinery Depreciation Cost($)	Machinery Investment Cost($)
Wheat	357.00*	35.70	100.00	10.00	10.00
Barley	357.00*	35.70	100.00	10.00	10.00
Canola	357.00*	35.70	100.00	10.00	10.00
Flaxseed	357.00*	35.70	100.00	10.00	10.00
Rye	357.00*	35.70	100.00	10.00	10.00
Corn	519.00**	51.90	130.00	13.00	13.00
Sunflowers	357.00*	35.70	110.00	11.00	11.00
Peas	519.00**	51.90	105.00	10.50	10.50
Lentils	357.00*	35.70	105.00	10.50	10.50
Buckwheat	357.00*	35.70	100.00	10.00	10.00
Navy Beans	519.00**	51.90	130.00	13.00	13.00

* Based on the three years average land value for the province.
** Based on the three years average land value for crop district 8.

13) Storage:

Assumed a 5% depreciation cost and 10% investment cost.

Farm storage requirements were assumed to be 30 bushels/acre costing $1/bushel for 75% of the storage and $1.25/bushel for 25% aerated storage.

Storage requirements for corn were calculated at 60 bushels/acre.

Example - Wheat

Depreciation	$\frac{\$30 - \$3}{20 \text{ years}}$	=	$1.35
Investment	$\frac{\$30 + \$3}{2}$ X 10%	=	$1.65
	sub-total		$3.00 X 75% = $2.25

Aeration Bins (1/4)

Depreciation	$\frac{\$37.50 - \$3.75}{20 \text{ years}}$	=	$1.69
Investment	$\frac{\$37.50 + \$3.75}{2}$ x 10%	=	$2.06
	sub-total		$3.75 X 25% = $0.94
		TOTAL	$3.19

14) Labor & Management

It depends upon the individual farm size, type of enterprises, and labor requirements.

Assumed cost - $40.77 per hectare ($16.50/acre).

This calculation could be equal to paid wages plus personal and family withdrawals from the farm business.

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FOR FURTHER INFORMATION SEE YOUR LOCAL MANITOBA AGRICULTURE OFFICE.